

In the Claims:

1. (Currently Amended) A fuel dispenser that dispenses fuel received from a main fuel piping conduit fluidly coupled to an underground storage tank, comprising:
 - a housing containing a fuel handling component area;
 - an internal fuel piping conduit that is fluidly coupled to the main fuel piping conduit to receive fuel; and
 - a leak collection chamber having a bottom and sides with an open top that is located inside said fuel handling component area and that collects fluid leaked inside said housing; and
 - a control system and a scale located underneath said leak collection chamber wherein said scale is coupled to said control system to register the weight of said leak collection chamber.
2. (Currently Amended) The fuel dispenser of claim 1 further comprising ~~a~~ an internal fuel piping conduit located inside said ~~hydraulics~~ fuel handling component area that is fluidly coupled to the main fuel piping conduit wherein said leak collection chamber is located on a first side of said internal fuel piping conduit.
3. (Currently Amended) The fuel dispenser of claim 1 further comprising a slanted collection plate located inside said ~~hydraulics~~ fuel handling component area that is coupled to a side of said leak collection chamber and to an inside surface of said housing that collects leaked fluid and transports the fluid to said leak collection chamber by gravitational force.
4. (Original) The fuel dispenser of claim 3, wherein said internal fuel piping conduit passes through an orifice inside said slanted collection plate.
5. (Cancelled).
6. (Currently Amended) The fuel dispenser of claim ~~[[5]]~~ 1, wherein said control system sends a signal to a controller when the weight of said leak collection chamber exceeds a threshold weight.

7. (Original) The fuel dispenser of claim 6, wherein said control system generates an alarm when the weight of said leak collection chamber exceeds a threshold weight.
8. (Currently Amended) The fuel dispenser of claim 6, wherein said controller or control system sends a signal to a submersible turbine pump that pumps fuel from the underground storage tank to the main fuel piping conduit to shut down said submersible turbine pump in response to receipt of said signal from said control system.
9. (Currently Amended) The fuel dispenser of claim ~~[[5]]~~ 1, wherein said control system correlates a fluid level in said leak containment chamber based on the weight of said leak containment chamber.
10. (Original) The fuel dispenser of claim 9, wherein said control system sends a signal to a controller when the fluid level of said leak collection chamber exceeds a threshold fluid level.
11. (Original) The fuel dispenser of claim 10, wherein said control system generates an alarm when the fluid level of said leak collection chamber exceeds a threshold fluid level.
12. (Currently Amended) The fuel dispenser of claim 10 wherein said controller or control system sends a signal to a submersible turbine pump that pumps fuel from the underground storage tank to the main fuel piping conduit to shut down said submersible turbine pump in response to receipt of said signal from said control system.
13. (Currently Amended) The fuel dispenser of claim 9, wherein said control system determines the rate of increase of the ~~liquid~~ fluid level in said leak ~~containment~~ collection chamber.
14. (Original) The fuel dispenser of claim 13 wherein said control system sends a signal to a controller if said rate of increase in the fluid level of said leak collection chamber exceeds a threshold rate of increase.

15. (Original) The fuel dispenser of claim 13, wherein said control system generates an alarm if said rate of increase in the fluid level of said leak collection chamber exceeds a threshold rate of increase.

16. (Currently Amended) The fuel dispenser of claim 14, wherein said controller or control system sends a signal to a submersible turbine pump that pumps fuel from the underground storage tank to the main fuel piping conduit to shut down said submersible turbine pump in response to receipt of said signal from said control system.

17-18. (Cancelled).

19. (Currently Amended) The A fuel dispenser of claim 18 that dispenses fuel received from a main fuel piping conduit fluidly coupled to an underground storage tank, comprising:

a housing containing a fuel handling component area;

an internal fuel piping conduit that is fluidly coupled to the main fuel piping conduit to receive fuel;

a leak collection chamber having a bottom and sides with an open top that is located inside said fuel handling component area and that collects fluid leaked inside said housing; and

a control system and a fluid level sensor located inside said leak collection chamber wherein said fluid level sensor is coupled to said control system to register the fluid level inside said leak collection chamber;

said control system sends a signal to a control system when the fluid level of said leak collection chamber exceeds a threshold fluid level, and wherein said control system generates an alarm when the fluid level of said leak collection chamber exceeds a threshold fluid level.

20. (Currently Amended) The A fuel dispenser of claim 18 that dispenses fuel received from a main fuel piping conduit fluidly coupled to an underground storage tank, comprising:

a housing containing a fuel handling component area;

an internal fuel piping conduit that is fluidly coupled to the main fuel piping conduit to receive fuel;

a leak collection chamber having a bottom and sides with an open top that is located inside said fuel handling component area and that collects fluid leaked inside said housing; and

a control system and a fluid level sensor located inside said leak collection chamber wherein said fluid level sensor is coupled to said control system to register the fluid level inside said leak collection chamber;

said control system sends a signal to a controller when the fluid level of said leak collection chamber exceeds a threshold fluid level, and

wherein said controller or said control system sends a signal to a submersible turbine pump located outside of the housing that pumps fuel from the underground storage tank to the main fuel piping conduit to shut down said submersible turbine pump in response to receipt of said signal from said control system.

21. (Original) The fuel dispenser of claim 1 wherein said controller is comprised from the group consisting of a site controller, a tank monitor, and a remote system.

22. (Currently Amended) The A fuel dispenser of claim 1 that dispenses fuel received from a main fuel piping conduit fluidly coupled to an underground storage tank, comprising:

a housing containing a fuel handling component area;

an internal fuel piping conduit that is fluidly coupled to the main fuel piping conduit to receive fuel; and

a leak collection chamber having a bottom and sides with an open top that is located inside said fuel handling component area and that collects fluid leaked inside said housing;

wherein said housing contains an exterior door that allows removal of said leak collection chamber from said housing.

23. (Original) The fuel dispenser of claim 22, wherein said exterior door contains a locking mechanism.

24. (Original) The fuel dispenser of claim 22 wherein said internal fuel piping conduit is coupled to a shear valve that contains a shut off latch wherein said leak collection chamber is

coupled to said shut off latch such that said shut off latch is activated when said leak collection chamber is removed from said housing.

25. (Cancelled).

26. (Currently Amended) ~~The A fuel dispenser of claim 25 further comprising, that dispenses fuel received from a main fuel piping conduit fluidly coupled to an underground storage tank, comprising:~~

a housing containing a fuel handling component area;

an internal fuel piping conduit that is fluidly coupled to the main fuel piping conduit to receive fuel;

a leak collection chamber having a bottom and sides with an open top that is located inside said fuel handling component area and that collects fluid leaked inside said housing;

a branch fuel piping conduit fluidly coupled to and between the main fuel piping conduit and said internal fuel piping conduit and that carries fuel to said internal fuel piping conduit, wherein said branch fuel piping conduit contains an inner piping and an outer piping that creates an annular space between said inner piping and said outer piping; and

a shear valve having an annular space that is coupled to said annular space and that couples said branch fuel piping conduit to said internal fuel piping conduit.

27. (Original) The fuel dispenser of claim 26, wherein said internal fuel piping conduit contains an inner piping and outer piping that creates an annular space between said inner piping and said outer piping, and wherein said annular space of said internal fuel piping conduit, said shear valve and said branch fuel piping conduit are all fluidly coupled to each other.

28. (Original) The fuel dispenser of claim 27, further comprising a main fuel piping conduit that contains an inner piping and outer piping that creates an annular space between said inner piping and said outer piping, wherein said main fuel piping is coupled to said branch fuel piping conduit and carries fuel to said branch fuel piping conduit, and wherein said annular space of said branch fuel piping conduit is coupled to said annular space of said main fuel piping conduit.

29-42. (Canceled).

43. (New) The fuel dispenser of claim 19 further comprising an internal fuel piping conduit located inside said fuel handling component area that is fluidly coupled to the main fuel piping conduit wherein said leak collection chamber is located on a first side of said internal fuel piping conduit.

44. (New) The fuel dispenser of claim 19 further comprising a slanted collection plate located inside said fuel handling component area that is coupled to a side of said leak collection chamber and to an inside surface of said housing that collects leaked fluid and transports the fluid to said leak collection chamber by gravitational force.

45. (New) The fuel dispenser of claim 44, wherein said internal fuel piping conduit passes through an orifice inside said slanted collection plate.

46. (New) The fuel dispenser of claim 19, wherein said control system is comprised from the group consisting of a site controller, a tank monitor, and a remote system.

47. (New) The fuel dispenser of claim 20 further comprising an internal fuel piping conduit located inside said fuel handling component area that is fluidly coupled to the main fuel piping conduit wherein said leak collection chamber is located on a first side of said internal fuel piping conduit.

48. (New) The fuel dispenser of claim 20 further comprising a slanted collection plate located inside said fuel handling component area that is coupled to a side of said leak collection chamber and to an inside surface of said housing that collects leaked fluid and transports the fluid to said leak collection chamber by gravitational force.

49. (New) The fuel dispenser of claim 48, wherein said internal fuel piping conduit passes through an orifice inside said slanted collection plate.

50. (New) The fuel dispenser of claim 20, wherein said controller is comprised from the group consisting of a site controller, a tank monitor, and a remote system.
51. (New) The fuel dispenser of claim 22 further comprising an internal fuel piping conduit located inside said fuel handling component area that is fluidly coupled to the main fuel piping conduit wherein said leak collection chamber is located on a first side of said internal fuel piping conduit.
52. (New) The fuel dispenser of claim 22 further comprising a slanted collection plate located inside said fuel handling component area that is coupled to a side of said leak collection chamber and to an inside surface of said housing that collects leaked fluid and transports the fluid to said leak collection chamber by gravitational force.
53. (New) The fuel dispenser of claim 52, wherein said internal fuel piping conduit passes through an orifice inside said slanted collection plate.
54. (New) The fuel dispenser of claim 26 further comprising an internal fuel piping conduit located inside said fuel handling component area that is fluidly coupled to the main fuel piping conduit wherein said leak collection chamber is located on a first side of said internal fuel piping conduit.
55. (New) The fuel dispenser of claim 26 further comprising a slanted collection plate located inside said fuel handling component area that is coupled to a side of said leak collection chamber and to an inside surface of said housing that collects leaked fluid and transports the fluid to said leak collection chamber by gravitational force.
56. (New) The fuel dispenser of claim 55, wherein said internal fuel piping conduit passes through an orifice inside said slanted collection plate.
57. (New) A fuel dispenser that dispenses fuel received from a main fuel piping conduit fluidly coupled to an underground storage tank, comprising:

a housing containing a fuel handling component area;
an internal fuel piping conduit that is fluidly coupled to the main fuel piping conduit to receive fuel;
a leak collection chamber having a bottom and sides with an open top that is located inside said fuel handling component area and that collects fluid leaked inside said housing; and
a control system and a fluid level sensor located inside said leak collection chamber wherein said fluid level sensor is coupled to said control system to register the fluid level inside said leak collection chamber;
wherein said control system determines the rate of increase of the fluid level in said leak collection chamber using said fluid level sensor.

58. (New) The fuel dispenser of claim 57 wherein said control system sends a signal to a controller if said rate of increase in the fluid level of said leak collection chamber exceeds a threshold rate of increase.

59. (New) The fuel dispenser of claim 57 wherein said control system generates an alarm if said rate of increase in the fluid level of said leak collection chamber exceeds a threshold rate of increase.

60. (New) The fuel dispenser of claim 58 wherein said control system or controller sends a signal to a submersible turbine pump that pumps fuel from the underground storage tank to the main fuel piping conduit to shut down said submersible turbine pump in response to receipt of said signal.

61. (New) The fuel dispenser of claim 57 further comprising an internal fuel piping conduit located inside said fuel handling component area that is fluidly coupled to the main fuel piping conduit wherein said leak collection chamber is located on a first side of said internal fuel piping conduit.

62. (New) The fuel dispenser of claim 57 further comprising a slanted collection plate located inside said fuel handling component area that is coupled to a side of said leak collection

chamber and to an inside surface of said housing that collects leaked fluid and transports the fluid to said leak collection chamber by gravitational force.

63. (New) The fuel dispenser of claim 62, wherein said internal fuel piping conduit passes through an orifice inside said slanted collection plate.

64. (New) The fuel dispenser of claim 57, wherein said control system sends a signal to a controller when the fluid level of said leak collection chamber exceeds a threshold fluid level.

65. (New) The fuel dispenser of claim 64, wherein said control system generates an alarm when the fluid level of said leak collection chamber exceeds a threshold fluid level.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.